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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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James Hunter Enis

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EXAMINER

FERNANDEZ RIVAS, OMAR F

ART UNIT

PAPER NUMBER

2129

DATE MAILED: 07/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/696,807	<b>Applicant(s)</b> ENIS ET AL.	
	<b>Examiner</b> Omar F. Fernández Rivas	<b>Art Unit</b> 2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,5-14,18-27 and 31-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5-14,18-27 and 31-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/1/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Office Action is in response to an AMENDMENT made by the Applicant entered on May 17, 2006.
2. The Office Action of February 26, 2006 is incorporated into this Final Office Action by reference.

### Status of Claims

3. Claims 1, 14 and 27 have been amended. Claims 2-4, 15-17 and 28-30 have been cancelled. Claims 1, 5-14, 18-27 and 31-39 are pending on this application.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5-14, 18-27 and 31-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skaaning et al in view of Weinberg et al (US Patent #6,535,865, referred to as **Skaaning**; US Patent #6,587,969, referred to as **Weinberg**).

### Claims 1, 14 and 27

Skaaning teaches a method, apparatus and module for searching potential solutions within a solution network (**Skaaning**: abstract, L1-2; Examiner's Note (EN): a troubleshooter searches for potential solutions to a problem. A Bayesian network is a

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solution network) comprising: authoring a solution to solve an issue (**Skaaning**: C6, L10-21); storing the solution within a decision tree relating to the issue (**Skaaning**: C6, L10-21; Fig. 4; EN: the knowledge acquired must be stored in the network to create the troubleshooter); and, searching the solution network based upon the issue, the searching including accessing the decision tree relating to the issue (**Skaaning**: C5, L5-16; C25, L 1-53; Fig. 6; Fig. 7; C27, L34-67; C28, L1-23; Fig. 8; C43, claim 1; EN: the troubleshooter will search the network to find a solution to the problem); and presenting results of a search in a graphical presentation (**Skaaning**: C8, L1-9; C8, L20-22; Fig. 1; EN: when accessing the troubleshooter and monitoring the process the results are presented in a display (graphical presentation)).

Skaaning does not teach the presenting including rendering results of the search in a hierarchical view, the hierarchical view enabling a user to bypass certain solutions by skipping steps (**Weinberg**: C5, L52-59; C8, L60-65; C11, L51-63); and rendering results of the search in a tree format, the tree format enabling navigating through trouble shooting steps one step at a time, the tree format enabling a user to pick and choose particular steps to access (**Weinberg**: C5, L52-61; C8, L63-65; C11, L51-67, C12, L 1-15).

It would have been obvious to one of ordinary skill in the arts at the time of the applicant's invention to modify the teachings of Skaaning by rendering the results of the search in a hierarchical view, allowing the user to skip steps as taught by Weinberg for the purpose of making the process of finding a solution faster by skipping steps that will not provide a useful solution to the problem.

It would have also been obvious to one of ordinary skill in the arts at the time of the applicant's invention to modify the teachings of Skaaning by rendering results of the search in a tree format, the tree format enabling navigating through trouble shooting steps one step at a time, the tree format enabling a user to pick and choose particular steps to access as taught by Weinberg for the purpose of allowing the user to select each step to execute so that only the steps relevant to the problem are performed.

**Claims 5, 18 and 31**

Skaaning teaches the searching includes a self learning symptom based search using a perception of an issue by the customer (**Skaaning**: C5, L53-67; C6, L22-53; EN: logging data collected from the user and the outcome of the troubleshooting session is self learning).

**Claims 6, 19 and 32**

Skaaning teaches the decision tree links and strengthens or lessens relevancies of trees to customer symptoms (**Skaaning**: C5, L32-44; C15, L5-20; EN: calculating the probabilities strengthen or lessens the relevancies of a tree in solving a problem).

**Claims 7, 20 and 33**

Skaaning does not teach enabling trees to be searchable by viewing a hierarchical view of trees organized based upon business needs.

Weinberg teaches enabling trees to be searchable by viewing a hierarchical view of trees organized based upon business needs (**Weinberg**: C2, L41-44; C5, L52-59; C11, L34-50).

It would have been obvious to one of ordinary skill in the arts at the time of the

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applicant's invention to modify the teachings of Skaaning by enabling trees to be searchable by viewing a hierarchical view of trees organized based upon business needs as taught by Weinberg for the purpose of allowing the user to view the solution trees in a way that shows the relationships between the problems and the solutions organized by processes.

**Claims 8, 21 and 34**

Skaaning does not teach storing the solution within a decision tree provides a dynamic tool that reuses content and renders content based on the symptom and requested environmental variables.

Weinberg teaches storing the solution within a decision tree provides a dynamic tool that reuses content and renders content based on the symptom and requested environmental variables (**Weinberg**: Abstract; C2, L41-56; EN: data input requested are environmental variables).

It would have been obvious to one of ordinary skill in the arts at the time of the applicant's invention to modify the teachings of Skaaning by storing the solution within a decision tree providing a dynamic tool that reuses content and renders content based on the symptom and requested environmental variables as taught by Weinberg for the purpose of creating the troubleshooter to provide the user with solutions to problems related to the operating state of the system and allowing the troubleshooter to reuse that information to provide solutions to future problems.

**Claims 9, 22 and 35**

Skaaning teaches storing the solution within a decision tree includes linking together existing knowledge articles to generate troubleshooting trees (**Skaaning**: C9, L31-34; C10, L34-44; C44, L14-20; EN: causes and subcauses are linked together to generate trees).

**Claims 10, 23 and 36**

Skaaning teaches authoring the solution includes creating new articles available for use through searching the knowledge base in other decision trees (**Skaaning**: C5, L24-44; C33, L49-67, C34, L1-2; Fig. 5; Fig. 11; C43, claim 6).

**Claims 11, 24 and 37**

Skaaning teaches authoring the solution includes creating content and troubleshooting trees by viewing an issue in a process flow (**Skaaning**: Abstract, L1-7; C8, L66-67; C9, L1-16, C44, L15-30; EN: a problem in the system is an issue in a process flow).

**Claims 12, 25 and 38**

Skaaning does not teach dragging and dropping of content to create relationships and create individual knowledge articles.

Weinberg teaches dragging and dropping of content to create relationships and create individual knowledge articles (**Weinberg**: C2, L51-56; C11, L1-5).

It would have been obvious to one of ordinary skill in the arts at the time of the applicant's invention to modify the teachings of Skaaning by incorporating dragging and dropping of content to create relationships and create individual knowledge articles as

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taught by Weinberg for the purpose of making it easier for the user to create trees by simply choosing content to inter-relate, relieving the user from the burden of having to actually program the system every time he wishes to create a new solution tree.

**Claims 13, 26 and 39**

Skaaning teaches authoring the solution is dynamic to enable content reviewers to review relationships between individual pieces of knowledge (**Skaaning**: C8, L20-22; C9, L31-34; C10, L34-44; EN: causes and subcauses are individual pieces of knowledge).

**Response to Applicant's arguments**

**In reference to Applicant's arguments:**

Skaaning and Weinberg, taken alone or in combination, do not teach or suggest [1] a method for searching potential solutions within a solution network [2] where the method includes storing the solution within a decision tree relating to the issue, [3] searching the solution network based upon the issue where the searching includes accessing the decision tree relating to the issue, [4] and presenting results of a search in a graphical presentation, much less such a method [5] where the presentation includes rendering results of the search in a hierarchical view which enables a user to bypass certain solutions by skipping steps, [6] and rendering results of the search in a tree format which enables navigating through trouble shooting steps one step at a time and enables a user to pick and choose particular steps to access, all as required by claim 1. Accordingly, claim 1 is allowable over Skaaning and Weinberg. Claims 5 - 13 depend from claim 1 and are allowable for at least this reason.



**Examiner's response:**

Regarding [1], Skaaning teaches a troubleshooter using Bayesian networks (the solution network) to troubleshoot a system. The troubleshooter will search for a solution within the network to remedy a problem in the system (**Skaaning**: abstract, L1-2; C5, L5-17; EN: suggesting an action to remedy problem causes).

Regarding [2], Skaaning teaches a knowledge acquisition (authoring) method for constructing the troubleshooter (**Skaaning**: C6, L10-21; C11, L17-30; Fig. 4). The knowledge acquired, including the solution to a problem must be stored in the network to create the troubleshooter. In column 11, lines 17-20, it states that on step 903 of figure 4 actions that can solve any of the causes of the problems are identified and listed.

Regarding [3], the troubleshooter of Skaaning searches the network to find a solution to the problem. The network searches troubleshooting nodes coupled to a corresponding cause node (**Skaaning**: C5, L5-16), thus searching the network based upon an issue.

Regarding [4], if the troubleshooter responds to the user's PC with suggestions for the user to perform, then the results must be graphically displayed.

Regarding [5], the system of Weinberg, presents the test in a hierarchical node structure so that the user can edit the test. The user is able to delete nodes which is considered as skipping a step. Moreover on columns 11, lines 60-65 and column 12, lines 2-15, it states that the user can modify the process to skip a step on the test.

Regarding [6], Weinberg discloses on column 5, lines 59-61, that the execution results of the test are presented as a node structure. Moreover, on column 17, lines 1-49 and figure 5F, Weinberg discloses that the user can select a node from the report tree to access a particular step of the test.

**In reference to Applicant's arguments:**

Skaaning and Weinberg, taken alone or in combination, do not teach or suggest an apparatus for searching potential solutions within a solution network where the apparatus includes means for storing the solution within a decision tree relating to the issue, means for searching the solution network based upon the issue where the search includes accessing the decision tree relating to the issue, and means for presenting results of a search in a graphical presentation, much less such an apparatus where the means for presenting includes means for rendering results of the search in a hierarchical view which enables a user to bypass certain solutions by skipping steps, and means for rendering results of the search in a tree format which enables a user to navigate through trouble shooting steps one step at a time and enables a user to pick and choose particular steps to access, all as required by claim 14. Accordingly, claim 14 is allowable over Skaaning and Weinberg. Claims 18 - 26 depend from claim 14 and are allowable for at least this reason.

**Examiner's response:**

The Examiner's responses [1] to [6] presented above are equally applied to these arguments.

**In reference to Applicant's arguments:**

Skaaning and Weinberg, taken alone or in combination, do not teach or suggest a system for searching potential solutions within a solution network where the system includes an authoring module, a storing module, a searching module and a presenting module where the storing module stores the solution within a decision tree relating to the issue and the searching module searches the solution network based upon the issue and the searching includes accessing the decision tree relating to the issue much less such a system where the presenting module includes a first and a second rendering module where the first rendering module renders results of the search in a hierarchical view which enables a user to bypass certain solutions by skipping steps and the second rendering module renders results of the search in a tree format which enables a user to navigate through trouble shooting steps one step at a time and enables a user to pick and choose particular steps to access, all as required by claim 27. Accordingly, claim 27 is allowable over Skaaning and Weinberg. Claims 31 - 39 depend from claim 27 and are allowable for at least this reason.

**Examiner's response:**

The Examiner's responses [1] to [6] presented above are equally applied to these arguments.

***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Correspondence Information***

6. Any inquires concerning this communication or earlier communications from the examiner should be directed to Omar F. Fernández Rivas, who may be reached Monday through Friday, between 8:00 a.m. and 5:00 p.m. EST. or via telephone at (571) 272-2589 or email [omar.fernandez.rivas@uspto.gov](mailto:omar.fernandez.rivas@uspto.gov).

If you need to send an Official facsimile transmission, please send it to (571) 273-8300.

If attempts to reach the examiner are unsuccessful the Examiner's Supervisor, David Vincent, may be reached at (571) 272-3080.

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Hand-delivered responses should be delivered to the Receptionist @ (Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22313), located on the first floor of the south side of the Randolph Building.

Omar F. Fernández Rivas  
Patent Examiner  
Artificial Intelligence Art Unit 2129  
United States Department of Commerce  
Patent & Trademark Office

Thursday, July 20, 2006

OF12

 7/27/06  
DAVID VINCENT  
SUPERVISORY PATENT EXAMINER